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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,374	03/05/2002	Stefan Gierl	6633	8254

7590 09/10/2004  
Samuels, Gauthier & Stevens LLP  
Suite 3300  
225 Franklin Street  
Boston, MA 02110

EXAMINER

PENDLETON, BRIAN T

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/092,374

**Applicant(s)**

GIERL ET AL.

**Examiner**

Brian T. Pendleton

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-21 is/are rejected.
- 7) ☒ Claim(s) 14 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13 and 15-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai, US Patent 4,833,715.

Regarding claim 1, Sakai discloses a FM stereo receiver comprising antenna 11, front end 12, IF amplifier 13, level detector 23, control circuit 25, stereo demodulator 19, mixer 20, switching circuit 22, and pseudo-stereo circuit 21. Antenna 11, front end 12, IF amplifier 13, level detector 23 read on “an FM receiver that receives an input signal and demodulates said input signal to provide an audio output signal and also provides a control signal indicative of the reception quality of said audio output signal” wherein level detector 23 and control circuit 25 provide a control signal indicative of the reception quality of the audio output signal from IF amplifier 13. The FM detector 14, noise eliminating circuit 15, LPF 16, buffer 18, stereo demodulator 19, and pseudo-stereo circuit 21 read on “a multichannel sound reproduction system that receives said audio output signal and said control signal and provides the plurality of speaker output signals wherein the sound reproduction associated with the plurality of speaker output

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signals is set by said multichannel sound reproduction system as a function of said control signal". As to claim 2, front end 12 has a tuner and the control signal generated by level detector 23 and control circuit 25, is based on the quality of the signal (received electric field intensity) from the front end 12 (see column 4 lines 52 – column 7 line 19 which disclose how the level detector 23 and control circuit 25 operate). Per claims 3 and 10, figure 7 demonstrates the function of the system wherein above  $E_{h1}$  there is stereo reproduction, between  $E_{h2}$  and  $E_{h1}$  there is mono sound reproduction, and below  $E_{h3}$  there is pseudo-stereo reproduction which reads on "stereo, pseudo-stereo, and mono sound reproduction is selectively [is effected within] provided in said multichannel sound reproduction system in response to stereo component in said audio output signal". As disclosed in column 6 line 55 – column 7 line 4, the middle region is called the separation and sound field correction mode whereby the separation degree is decreased. This results in a mixture of the left signal in the right channel and the right signal in the left channel (along with some pseudo-stereo components) which is a mono sound reproduction, albeit partial in nature. As to claim 4, figure 7 illustrates that there is a stereo signal reproduction when the received electric field level (stereo component) is below a threshold value of infinity. Per claim 5, pseudo stereo signals are reproduced when the stereo component is below a threshold value of  $E_{h3}$ . As to claim 6, mono signals are produced with the stereo component is below a threshold value of  $E_{h1}$ .

Regarding claim 7, the method steps are met by the apparatus which is a "a multi-channel sound reproduction system with a plurality of speakers which is connected to the output of an FM stereo receiver that controls the stereo and mono component in the output signal in response to the reception signal" which has level detector 23 and control circuit 25 for providing "a

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control signal derived from the reception quality controls the sound reproduction of the multichannel sound reproduction system.” As to claim 8, the control signal from level detector 23 and control circuit 25 is used to control the multichannel sound reproduction system according to the graph of figure 7. As to claim 9, the level detector 23 determines the quality signal generated from the tuner (front end 12) of the FM stereo receiver. Per claims 11-13, as stated previously, figure 7 shows the threshold values upon which stereo, pseudo-stereo and mono reproduction occurs. It is noted that the Applicant has not claimed a specific order of the thresholds therefore the reference reads on the three threshold values.

Regarding claim 15, Sakai discloses a FM stereo receiver with front end 12 and IF amplifier 13, level detector 23 and control circuit 25 which reads on “an FM stereo receiver that provides an audio output signal and a control signal indicative of the reception quality of said audio output signal”. The signals from pseudo-stereo unit 21 are multichannel are based upon the control signal from control circuit 25 to level setting units 26, 27 and level control units 28, 29 which reads on “a multichannel sound reproduction system with a plurality of speakers which is connected to the output of an FM stereo receiver in which the stereo component and the mono component are controlled in the output signal in response to the reception signal”. Figure 7 shows that the control signal varies the stereo and mono components in the output signals from pseudo-stereo unit 21 which reads on “a control signal derived from the reception quality is provided to control the sound reproduction of the sound reproduction system.” As to claim 16, the control signal from circuit 25 which controls stereo and mono component mixture in the output signals inherently controls the multichannel sound reproduction system since it is part of the system. Per claim 17, the control signal generated at control circuit 25 is based on the level

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of the electrical field intensity measured by level detector 23 which is derived from a quality signal generated from front end 12. Regarding claim 18, figure 7 demonstrates the function of the system wherein above  $E_{h1}$  there is stereo reproduction, between  $E_{h2}$  and  $E_{h1}$  there is mono sound reproduction, and below  $E_{h3}$  there is pseudo-stereo reproduction which reads on "stereo, pseudo-stereo, or mono sound reproduction is provided in the multichannel sound reproduction system in response to the stereo component in said audio output signal of the FM stereo receiver." As to claims 19-21, as stated previously, figure 7 shows the threshold values upon which stereo, pseudo-stereo and mono reproduction occurs.

***Allowable Subject Matter***

4. Claims 14 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Drawings***

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the reference part names are not legible. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Conclusion***

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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taira, US Patent 6,535,608.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**BRIAN PENDLETON**  
**PATENT EXAMINER**

